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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/892,365	06/26/2001	Haim Weissman	000298C1	2777

7590 06/04/2002

QUALCOMM Incorporated
5775 Morehouse Drive
San Diego, CA 92121-1714

EXAMINER
TORRES, MARCOS L

ART UNIT	PAPER NUMBER
2683	

DATE MAILED: 06/04/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/892,365	WEISSMAN ET AL.	
	Examiner	Art Unit	
	Marcos L Torres	2683	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) *1-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *4* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Double Patenting

1. Claims 1-10 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1-10 of copending Application No. 09/596955. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-2 and 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jun in view of Huang and further view of Dean.

As to claim 1 and 2, Jun discloses a method for wireless communication, comprising: positioning a first plurality of slave transceivers within a region, wherein the region is generally unable to receive signals transmitted over the air from the BTS (see col. 2, lines 34-49); receiving at the first plurality transceivers a reverse radio frequency (RF) signal generated by a mobile transceiver within the region and generating respective slave signals responsive thereto (see col. 5, lines 7-12); conveying the slave signals separately to a base station transceiver subsystem (BTS) external to the region (see col. 5, lines 12-14). Jun do not specifically disclose positioning a second plurality of slave transceivers within the region in positions spatially separated from the positions of the first plurality of slave transceivers; conveying the first and second slave signals separately to a base station transceiver subsystem (BTS) external to the region and processing the slave signals conveyed to the BTS so as to recover information contained in the reverse RF signal generated within the region. Huang discloses positioning a second plurality of slave transceivers within the region in positions spatially separated from the positions of the first plurality of slave transceivers (see col. 1, lines 49-54). Huang do not specifically disclose conveying the first and second slave signals separately to a base station transceiver subsystem (BTS) external to the region and

processing the slave signals conveyed to the BTS so as to recover information contained in the reverse RF signal generated within the region. Dean discloses conveying the first and second slave signals separately to a base station transceiver subsystem (BTS) external to the region and processing the slave signals conveyed to the BTS so as to recover information contained in the reverse RF signal generated within the region (see col. 8, line 64 – col. 9, line 55). Therefore, it would have been obvious to one of the ordinary skill in the art at the time of the invention to combine these teachings for an improved indoor reception minimizing fading.

As to claims 4 and 5, Jun discloses the method comprising: conveying a forward RF signal from the BTS to a master unit; down-converting the forward/reverse RF signal to a forward IF signal; conveying the IF signals to a plurality of slave transceivers respectively; processing the IF signals to recover the forward RF signal; and transmitting the forward RF signal to the mobile transceiver (see col. 2, lines 34-49). Jun does not specifically disclose splitting the forward IF signal into a first and a second IF signal; delaying the second IF signal. Huang disclose splitting the forward IF signal into a first and a second IF signal (see col. 1, lines 49-54), delaying the second IF signal (see col. 4, lines 34-67). Therefore, it would have been obvious to one of the ordinary skill in the art at the time of the invention to combine these teachings for enhanced reception.

5. Claims 3 and 6-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jun in view of Huang and further view of Dean as applied to claims 1-2 and 4-5 above, and further in view of Bassirat.

As to claim 3, Jun discloses everything claimed as explained above except for the method wherein conveying the first and second slave signals separately to the BTS comprises orthogonal polarizing the signals. Bassirat discloses the method wherein conveying the first and second slave signals separately to the BTS comprises orthogonal polarizing the signals (see col. 3, lines 41-62). Therefore, it would have been obvious to one of the ordinary skill in the art at the time of the invention to add the Bassirat teachings to the modified Jun method for enhanced coverage.

Regarding claims 6-10, they are the corresponding apparatus claims of method claims 1-5. Therefore, claims 6-10 are rejected for the same reason shown above.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Weissman U.S. Pub. 2002/0039885

b. Fuerter U.S. Patent 6,125,109

c. Chu U.S. Patent 5,890,055

d. Shyy U.S. Patent 6,178,334

e. Light U.S. Patent 5,930,293

f. Langston U.S. Patent 6,272,351

g. Chavez U.S. Patent 6,078,823

h. Kallander U.S. Patent 5,603,080

i. Rode U.S. Patent 6,157,818

Any response to this Office Action should be mailed to:

Commissioner of Patent and Trademarks
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Or faxed to:

(703) 308-6306

For formal communication intended for entry, informal communication or draft communication; in the case of informal or draft communication, please label "PROPOSED" or "DRAFT"

Hand delivered responses should be brought to:

Crystal Park II
2121 Crystal Drive
Arlington, VA
Sixth Floor (Receptionist)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marcos L Torres whose telephone number is 703-305-1478. The examiner can normally be reached on 8:00am-5:30pm alt. friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William G Trost can be reached on 703-305-5318. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

Marcos L Torres
Examiner
Art Unit 2683

WILLIAM TROST
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

Mlt
May 31, 2002